Indiana Dunes

National Park Service
U.S. Department of the Interior

Indiana Dunes National Lakeshore

Prescribed Fire

Fire at Indiana Dunes National Lakeshore

Historically, fires have played an important role in shaping the diverse landscape of Indiana Dunes. By using prescribed fire as one management tool, the National Park Service is working to restoring the natural communities. To measure the effects of prescribed fires over time, vegetation monitoring is being conducted by the parkôs fire monitoring program. The fire monitoring program along with park ecologists measure the effects of prescribed fires to see if park objectives were met.

The History of Fire

Fire has a long history here. Lightning fires that ignited sun-cured prairies and glades, often with no accompanying rain, were a part of the natural environment. Fire occurrence in this area was supplemented and intensified by human activities.

American Indians used fire as a tool for wildlife and vegetation management, insect control, and warfare. Today, fire is used by ecologists and wildlife managers to benefit plants, animals, and humans by supporting diversity and reducing wildfires.

Benefits of Prescribed Fire

Fire is a natural process that profoundly influences the native vegetation of the region. For many plant species, fire is essential for regeneration. Native species, unlike many non-native species, have specially adapted root systems that extend up to 2 meters into the soil allowing quick recovery from fire. High temperatures generated by fire penetrate only a few centimeters of soil. Many native plants, such as oaks, can withstand fire damage because they have a thick, insulating bark.

Prescribed fire is used as a tool to rehabilitate the natural communities, such as prairies and savannas, reduce woody brush, and increase native species diversity. For the native, ñfire-tolerantòplants of Indianan Dunes, occasional fire provides important benefits including:

- stimulating native plant production,
- controlling woody plant invasion,
- releasing nutrients back into the soil to enhance plant growth,
- suppressing non-native species, and
- inhibiting disease and insect infestations.

Conducting a Prescribed Fire

Indiana Dunes National Lakeshoreôs prescribed fire program is conducted under the guidance and direction of trained and experienced National Park Service fire personnel. Burns are carefully planned under specific guidelines and performed under the control of a trained crew with specialized equipment.

Prescribed fires have management goals and specific objectives for each site. Before burning, a designated set of conditions must exist including ideal air temperature, precipitation, wind speed and direction, and relative humidity. Weather conditions are also monitored throughout the duration of the burn to make sure the burn is done safely.

Natural and mechanical firebreaks, such as creeks or mowed lines, are used to reduce the amount of water and staffing required for fire maintenance by reducing the likelihood of fire spreading to areas outside the prescribed burn location. However, the inconvenience of some smoke is always possible, even though

fire personnel plan ignition methods to avoid putting excess smoke in the area.

Prescribed fires differ from wildfires because prescribed fires are implemented under specific conditions and at lower intensities than wildfires. While prescribed fires can have a beneficial effect on the landscape, wildfires at Indiana Dunes National Lakeshore are immediately suppressed because they may be more unpredictable and can potentially threaten life and property.

Protecting Park Neighbors

Another benefit of conducting prescribed fires at Indiana Dunes is the reduction in the risk of a wildfire spreading outside of the park bounderies onto private land. Wildfire does not recognize political boundaries and does not know were the park stops and private land begins, and vice versa. Private lands such as homes or farms boarder the park. These areas, where natural areas and homes are intersperced, are called Wildland-Urban Interface areas.

Long fire-free intervals and natural disasters such as tornados, can lead to the hazardous accumilation of dead trees and branches or thick grass litter in areas of the park. To reduce these ñhazardous fuels,ò and prevent unwanted wildfire growth, park managers use prescribed fire as a tool in removing these fuels. When burned under the right conditions, these hazardous fuels will be consumed and will not provide fodder for any unpredicted wildfire.

Location of Prescribed Fire Units